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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,627	01/13/2006	Son Nguyen-Kim	13111-00030-US1	9624
23416 7590 10/08/2009 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899			EXAMINER BARHAM, BETHANY P	
			ART UNIT 1615	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/564,627	<b>Applicant(s)</b> NGUYEN-KIM ET AL.	
	<b>Examiner</b> BETHANY BARHAM	<b>Art Unit</b> 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 3-10, 14-17 and 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 11-13, 18 and 23 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/2/09</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Summary***

Receipt of IDS filed on 4/2/09 is acknowledged. Applicant's Response and Claim Amendments filed on 6/17/09 are also acknowledged. Claims 1-23 are pending.

Due to Applicant's claim amendments the previous rejections of record are hereby withdrawn.

### **Response to Argument Regarding Election/Restrictions**

Applicants argue that the Examiner is in error for the withdrawal of claims 3-5, 7-10 and 14-17. However, Applicant previously elected with traverse Group I in the reply filed on 11/28/08 and also at that time elected species for the purpose of examination A1) vinylimidazole and vinyl-pyrrolidone, A2) acrylic acid and B) water. Upon further consideration the Examiner withdraws the species election for the carrier B) of claim 1. The Examiner respectfully points out that the required the election of polymer A1 stated "one copolymer of vinylimidazole and/or derivative thereof and at least one further monomer (claims 1-8)" (restriction 10/30/08, see pg. 2) from originally filed claims 1-8. As noted claims 1-8 as originally filed included components a, b, c, and d, but Applicant elected for examination purposes "a copolymer of vinylimidazole and vinyl-pyrrolidone" (pg. 10 and 11, response 11/28/08) or a and b and nothing further; thus the Examiner respectfully submits that the claims were then limited to a copolymer of vinylimidazole and vinyl-pyrrolidone (or a and b only) by Applicant's own election. Claim 6 was

Art Unit: 1615

originally examined in error by the Examiner since c and d are present, therefore claim 6 is also withdrawn. Similarly the election of species was set out for A2) “at least one acid-group containing polymer (claims 9-10 and 14-17)” and Applicant elected A2) to be acrylic acid or a homopolymer, thus removing claims 9-10 and 14-17 drawn to copolymers. As such, claims 3-10, 14-17 and 19-22 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species and invention, there being no allowable generic or linking claim. Claims 1-2, 11-13, 18 and 23 will be examined in the instant application. Applicant timely traversed the restriction (election) requirement in the reply filed on 11/28/08. The requirement is still deemed proper and therefore remains FINAL.

### ***NEW OBJECTIONS/REJECTIONS***

Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. With the present amendment, both claims recite ‘a) vinylimidazole and/or a derivative thereof...and b) at least one N-vinylactam’, as such claim 2 does not further limit claim 1.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1615

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 11-13, 18 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,391,292 ('292).

The instant claims are drawn to a cosmetic or pharmaceutical composition comprising A) at least one water-soluble or water-dispersible polyelectrolyte complex comprising A1) at least one water-soluble or water-dispersible copolymer with cationogenic groups which comprises, in copolymerized form, a) of from 1 to 70% by weight, based on the total weight of the monomer used for the polymerization, vinylimidazole and/or a derivative thereof in at least partially uncharged form, and b) of from 30 to 99% by weight, based on the total weight of the monomer used for the polymerization, of at least one N-vinyl lactam wherein the copolymer A1 comprises not monomers with an anionogenic group and/or anionic group, and A2) at least one acid-group-containing polymer, and B) at least one cosmetically acceptable carrier. (Elected species are A1) vinylimidazole and vinyl-pyrrolidone, A2) acrylic acid and B) water).

- '292 teaches a composition for the hair comprising a cationic polymer and an anionic polymer in a cosmetically acceptable medium such as water or ethanol (abstract, claims 1-2). Preferred cationic polymers of '292 include Luvitec VPI 55K72 (a 50/50 copolymer of vinylpyrrolidone-vinylimidazole; col. 13, line 30-31) (according to the limitations of instant claim 1 A1). Preferred anionic polymers include Avalure, an acrylic polymer (col. 2, lines 16-18 and col. 13, line 26) (according to the limitations of instant claim 1 A2).

Art Unit: 1615

- Example Table 1 Composition 3 teaches 0.35% Luvitec VPI 55K72 with 2.65% Avalure in a cosmetically acceptable medium of ethanol (according to the limitations of instant claims 1 and 2).
- The Example of '292 is directed to styling compositions packaged as aerosols with DME (dimethyl ether). '292 also teaches mousse, lacquer, spray, gels, etc (col. 12, lines 51-60) and additives such as thickeners, surfactants, etc (col. 12, lines 38-44) (meeting the limitations of instant claims 12-13 and 18).
- The limitation of instant claim 23 is met since '292 teaches including 0.35% by weight of Luvitec VPI 55 copolymer and 2.65% by weight Avalure and as such the anionic polymer would be in excess. Further '292 teaches that the concentration of polymer A of '292 (or Avalure) can be 4000 times that of polymer B (or cationic polymer) (col. 12, lines 28-31).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 11-13, 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0161387 ('387) (as cited by Applicant in IDS).

Art Unit: 1615

- '387 is a hair composition comprised of a cosmetically acceptable aqueous medium, at least one copolymer of N-vinylpyrrolidone and N-vinylimidazole and at least one other fixing polymer such as an anionic polymer (abstract, claims 1 and 6-8). N-vinylpyrrolidone and N-vinylimidazole are present in an amount of 10-90% (claim 4, [0018]). According to '387 the preferred polymer of N-vinylpyrrolidone and N-vinylimidazole is Luvitec VPI 55 K61 [0019]. The anionic fixing polymer is a homopolymer of acrylic acid such as Versicol E or K [0029] (meeting the limitations of instant claims 1-2).
- Example 2 of '387 teaches a spray (aerosol) composition comprising 1% Luvitec VPI 55 K61, 4% Luviset PUR, water, ethanol, and DME. Luvitec VPI 55 K61 is in a lesser amount than the other fixing polymer. Additives such as thickening agents, surfactants etc are also taught [0148] (meeting the limitations of instant claims 12-13 and 23).
- '387 does not teach a specific example with Luvitec VPI 55 K61, polyacrylic acid and water, but does teach Luvitec VPI 55 K61, another fixing polymer and water. A reference is analyzed using its broadest teachings. MPEP 2123 [R-5].

"[W]hen a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious". KSR v. Teleflex, 127 S.Ct. 1727, 1740 (2007)(quoting Sakraida v. A.G. Pro, 425 U.S. 273, 282 (1976)). "[W]hen the question is whether a patent claiming the combination of elements of prior art is obvious", the relevant question is "whether the improvement is more than the predictable use of prior art elements according to their established functions." (Id.).

Art Unit: 1615

Addressing the issue of obviousness, the Supreme Court noted that the analysis under 35 USC 103 “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” KSR v. Teleflex, 127 S.Ct. 1727, 1741 (2007). The Court emphasized that “[a] person of ordinary skill is... a person of ordinary creativity, not an automaton.” Id. at 1742.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the anionic and cationic polymer in water composition of ‘387 with the known specific anionic and cationic polymers disclosed in ‘387 and substitute by simple substitution the specific anionic polymer of acrylic acid into Example 2 to obtain the predictable result of a composition comprising A1) copolymers of vinylpyrrolidone-vinylimidazole, A2) acrylic acid in B) water.

Claims 1-2, 11-13, 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 197 50 520A in view of US 7,560,493 (‘493). US 6,482,394 B1 (‘394) is the English equivalent of DE 197 50 520A and is referred to for the teachings of this reference.

- ‘394 teaches a hair treatment composition comprising at least one cationic and at least one anionic polymer in water (col. 1, lines 8-11, 45-49 and col. 8, lines 32-34) (meeting the limitations of claim 1 and 11). Preferred cationic polymers include copolymers of vinylpyrrolidone-vinylimidazole (col. 7, lines 35-36) (according to the limitations of claims A1, and 2). Preferred anionic polymers



Art Unit: 1615

include homopolymers of acrylic or methacrylic acid (col. 8, lines 3-5) (according to the limitations of claim A2).

- '394 teaches that propellants, alcohols and additional auxiliaries include colorants, preservatives, emulsifiers, fragrances, electrolytes, viscosity regulators, foam stabilizers, etc (col. 8, lines 40-55) (according to the limitations of claim 12 and 18).
- '394 teaches that the composition is preferably in the form of lotion, gels or foams (col. 9, lines 60-67) (according to the limitations of claim 13).
- Examples 11-12 teach a hair gel composition comprising A1) polyquaternium 46 (vinylcaprolactam/vinylpyrrolidone/quaternized vinylimidazole polymer), A2) Carbomer (acrylic acid) in amounts of 0.50% by weight in B) water with an added surfactant AMP, preservative Euxyl K 100 and a thickener such as the copolymer Luvimer MAE 30D.
- '394 do not teach "A1) at least partially uncharged form of vinylimidazole and N-vinylactam"o(where Applicant has elected vinyl-pyrrolidone for the vinylactam, but do teach compositions of anionic polymer and cationic copolymers of vinylimidazole and N-vinylactam in water generically and cationic copolymers with acrylic acid.
- '493 teaches cosmetics including cationic copolymers of N-vinylimidazole and vinylpyrrolidone, specifically Luvitec VPI 55 which is a 50/50 copolymer included in an amount of 0.1-5%, preferably 0.1-2% by weight (abstract, col. 3, lines 35-57 and 62-65) (meeting the limitations of instant claims 1 A1) and 23).

Art Unit: 1615

- The limitation of instant claim 23 is met since '493 teaches including 0.1% by weight of Luvitec VPI 55 copolymer and '394 teaches 0.50% by weight Carbomer 940 (nominal mw of 4,000,000) and as such the anionic polymer would be in excess.

A reference is analyzed using its broadest teachings. MPEP 2123 [R-5].

"[W]hen a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious". KSR v. Teleflex, 127 S.Ct. 1727, 1740 (2007)(quoting Sakraida v. A.G. Pro, 425 U.S. 273, 282 (1976)). "[W]hen the question is whether a patent claiming the combination of elements of prior art is obvious", the relevant question is "whether the improvement is more than the predictable use of prior art elements according to their established functions." (Id.). Addressing the issue of obviousness, the Supreme Court noted that the analysis under 35 USC 103 "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." KSR v. Teleflex, 127 S.Ct. 1727, 1741 (2007). The Court emphasized that "[a] person of ordinary skill is... a person of ordinary creativity, not an automaton." Id. at 1742.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the anionic and cationic polymer in water composition of '394 with the known specific anionic and cationic polymers disclosed in '394 and substitute by simple substitution the specific cationic copolymer Luvitec VPI of '493 to obtain the predictable result of a composition comprising A1) copolymers of

Art Unit: 1615

vinylpyrrolidone-vinylimidazole, A2) acrylic acid in B) water. Further, it would be within the purview of the skilled artisan to substitute into the acrylic acid composition of Examples 11-12 the specific cationic polymer of '493 since they are taught to be preferred cationic polymers with the predictable result of a hair composition.

Claims 1-2, 11-13, 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,391,292 ('292).

- '292 teaches a composition for the hair comprising a cationic polymer and an anionic polymer in a cosmetically acceptable medium such as water or ethanol (abstract, claims 1-2). Preferred cationic polymers of '292 include Luvitec VPI 55K72 (a copolymers of vinylpyrrolidone-vinylimidazole col. 13, line 30-31) and Example Table 1 Composition 3 teaches 0.35% Luvitec VPI 55K72 with 2.65% Avalure in a cosmetically acceptable medium (according to the limitations of claims 1 and 2). Preferred anionic polymers include Avalure an acrylic polymer (col. 2, lines 16-18 and col. 13, line 26) (according to the limitations of claim A2).
- The limitation of instant claim 23 is met since '292 teaches including 0.35% by weight of Luvitec VPI 55 copolymer and 2.65% by weight Avalure and as such the anionic polymer would be in excess.
- '508 does not teach a single example with the elected species A1) copolymers of vinylpyrrolidone-vinylimidazole, A2) acrylic acid in B) water, but does teach compositions of anionic polymer and cationic polymers in water and copolymers of vinylpyrrolidone-vinylimidazole with methacrylic acid (Example 20).

Art Unit: 1615

A reference is analyzed using its broadest teachings. MPEP 2123 [R-5].

“[W]hen a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious”. KSR v. Teleflex, 127 S.Ct. 1727, 1740 (2007)(quoting Sakraida v. A.G. Pro, 425 U.S. 273, 282 (1976)). “[W]hen the question is whether a patent claiming the combination of elements of prior art is obvious”, the relevant question is “whether the improvement is more than the predictable use of prior art elements according to their established functions.” (Id.). Addressing the issue of obviousness, the Supreme Court noted that the analysis under 35 USC 103 “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” KSR v. Teleflex, 127 S.Ct. 1727, 1741 (2007). The Court emphasized that “[a] person of ordinary skill is... a person of ordinary creativity, not an automaton.” Id. at 1742.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the anionic and cationic polymers in water composition of '508 with the known specific anionic and cationic polymers disclosed in '508 to obtain the predictable result of a composition comprising A1) copolymers of vinylpyrrolidone-vinylimidazole, A2) acrylic acid in B) water. Further, it would be within the purview of the skilled artisan to substitute into the Luviquat FC 905 composition of Example 20 the specific anionic polymer of acrylic acid for the methacrylic acid since both are taught to be preferred acceptable anionic polymers (col. 8, lines 50-53), with the predictable result of a hair gel.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-2, 11-13, 18 and 23 have been considered but are moot in view of the new grounds of rejection necessitated by applicants' amendments.

### ***Conclusions***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Correspondence***

Art Unit: 1615

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bethany Barham whose telephone number is (571)272-6175. The examiner can normally be reached on M-F, 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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